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A COURSE IN FOOD ECONOMIES FOR THE  
HOUSEKEEPER.

Home economics teachers are frequently called upon to give lectures to groups of women who desire to do their part in the campaign for food economy. The following outlines have been made in answer to requests that have come to the Bureau of Education for suggestions in regard to the subjects which should receive emphasis in such a course. References given include only recent publications dealing with food study. A sufficiently wide range of subject matter has been included in the references to provide material for teachers working under widely differing conditions.

LESSON I. THE NEEDS OF THE BODY.

An adequate diet—proteins, carbohydrates, fats, mineral constituents, vitamins, and water.

Minimum requirements for health.

Adaptation necessary with varying conditions of age, occupation, and health. Danger of overeating; danger of undereating.

*References.*

- Langworthy. Food selection for rational and economical living. (Revised ) Journal of Home Economics. 15 cents.
- Lusk, Graham. The fundamental basis of nutrition. Yale University Press. 50 cents.
- Mendel, La Fayette B. Changes in the food supply and their relation to nutrition. Yale University Press. 50 cents.
- Rose, Mary S. Everyday foods in war time. New York, Macmillan. 80 cents.
- Feeding the family. New York, Macmillan. \$2.10.
- Stiles, Percy. An adequate diet. Harvard Health Talks. 50 cents.
- Nutritional physiology. Philadelphia, W. B. Saunders Co. \$1.25.
- United States. Department of Agriculture. Farmers' Bulletin 142. Principles of nutrition and nutritive value of food.
- Farmers' Bulletin 808. How to select foods. I. What the body needs.
- Farmers' Bulletin 817. How to select foods. II. Cereal foods.
- Farmers' Bulletin 824. How to select foods. III. Food rich in protein.
- United States Food Leaflet, No. 4. Choose your food wisely.

**LESSON II. THE FOOD PROBLEM IN WAR TIME.**

Situation before the war.

Changes brought about during the war as affecting production, transportation, storage, cost, consumption, and conservation.

Need of food control—purpose and methods of control.

Food control in other countries.

*References.*

American Academy of Political and Social Science. The world's food. *Annals*, Vol. 74, No. 163, November, 1917.

Fraser, Helen. Women and war work. New York, G. Arnold Shaw. \$1.50.

Kellogg, *Mrs.* Charlotte. The women of Belgium. New York, Funk & Wagnalls. \$1.

Kellogg and Taylor. The food problem. New York, Macmillan. \$1.25.

Van Hise, Charles R. Conservation and regulation in the United States. Part I. Published by the United States Food Administration. Part II. Published by the University of Wisconsin, Madison, Wis.

Wood, T. B. and Hopkins, F. G., Food economy in war time. New York, G. P. Putnam's Sons. 15 cents.

Reports of the Food Administration to be obtained from the office of the State Food Administrator or from the Food Administration in Washington.

Reports contained in weekly and monthly magazines and in conservative newspapers.

Reports of the United States Department of Agriculture contained in the weekly news-letter, and in circular letters issued by the department, or circulated through the daily papers and farm magazines.

Food needs for 1918. Circular No. 75. Office of the Secretary, U. S. Department of Agriculture.

The agricultural situation for 1918. Dairying. Circular No. 85. Office of the Secretary, U. S. Department of Agriculture.

Agricultural production for 1918. Spring Planting and Live Stock Circulars No. 103. Office of the Secretary, U. S. Department of Agriculture.

**LESSON III. USE OF GARDEN PRODUCTS.**

Reducing the transportation and cost of foods by home production.

Fruits and vegetables that can be raised in the home garden.

Cultivation of salad plants to increase mineral content of the diet.

Raising of peas, beans, peanuts, and other legumes as a substitute for meat.

Abundant use of fresh winter vegetables that are easily kept—cabbage, turnips, onions, carrots, potatoes, etc.

Use of canned vegetables throughout the winter.

*References.*

United States. Department of Agriculture. Farmers' Bulletin 839. Home canning by the one-period cold-pack method.

——— Farmers' Bulletin 841. Home and community drying of fruits and vegetables.

——— Farmers' Bulletin 853. Home canning of fruits and vegetables.

——— Farmers' Bulletin 856. Control of diseases and insect enemies of the home vegetable garden.

United States. Department of Agriculture. Farmers' Bulletin 871. Fresh fruits and vegetables as conservers of other staple foods.

——— Farmers' Bulletin 879. Home storage of vegetables.

——— Farmers' Bulletin 881. Salting, fermentation, and pickling of vegetables.

——— Farmers' Bulletin 884. Saving vegetable seeds for the home and market garden.

——— Farmers' Bulletin 903. Commercial evaporation and drying of fruits.

——— Farmers' Bulletin 907. Bean growing in eastern Washington and Oregon and northern Idaho.

——— Farmers' Bulletin 916. A successful community drying plant.

——— Farmers' Bulletin 934. Home gardening in the South.

——— Farmers' Bulletin 936. The city and suburban vegetable garden.

——— Farmers' Bulletin 937. The farm garden in the North.

——— Interior Department. Bureau of Education. Bulletin No. 47, 1917. The preparation and preservation of vegetables.

——— National War Garden Commission.<sup>1</sup> Home canning and drying of vegetables and fruits.

——— War vegetable gardening and the home storage of vegetables.

See also publications of State agricultural colleges.

#### LESSON IV. COMPARATIVE FOOD VALUE OF READILY AVAILABLE FOODS WITH RELATION TO THEIR COST.

Cost of food per market unit, per calorie, per protein content, per portion for serving.

Classification of foods according to their cost per 100 calorie portion and per one-half ounce protein portion.

##### *References.*

Cooper, Lenna Frances. How to cut food costs. Battle Creek, Mich., The Good Health Publishing Co. 75 cents.

Fisk. Food. New York, Life Extension Institute, 25 West Forty-fifth Street. 10 cents.

Food supply in families of limited means. Boston, League for Preventive Work, 44 Bromfield Street. 10 cents single copies.

Gephart-Lusk. Analysis and cost of ready to serve foods. American Medical Association. 50 cents.

Locke, Edwin A. Food values. New York, D. Appleton & Co. \$1.

Rubner. The nutrition of the people. Journal of Home Economics, Vol. 5, No. 1, February, 1913.

Simmons College, Boston, Mass. Food charts showing the comparative fuel value of common foods in relation to their cost.

Set of six wall charts, \$1.50; Housekeepers' set, 8½x23, 8 cents apiece in quantities of one hundred, 10 cents apiece single.

See also references included in Lesson I.

#### LESSON V. THE ECONOMICAL USE OF FOODS THROUGH THE DEVELOPMENT OF SIMPLE RECIPES.

Use standard recipes as a basis, know proportions for batters, leavening agents, shortening, thickening for sauces and soups, etc.

Make eliminations and substitutions to meet the present changed food conditions. Decrease the amount of wheat flour, sugar, meat, and fat as much as possible in all recipes.

<sup>1</sup> 210-220 Maryland Building, Washington, D. C.



Develop recipes that are *generally liked* and can be frequently used.

Use new combinations with discretion. (A substitute may not be used in all recipes.)

Adhere to simple flavors—for example, use peanuts only in combination with foods of very mild flavor so that the result will not be a confusion of flavors.

Do not combine several foods of varying flavor, however mild. Oatmeal, barley, rice, beans, etc., are not improved either in texture or flavor by being combined one with the other.

Have definite standards for appearance, texture, and flavor of dishes prepared.

Avoid recipes that require a great deal of work in preparation or that are easily perishable after preparation.

Avoid recipes that require a great deal of fuel in preparation. Adjust dampers and drafts carefully in order to conserve fuel. Recipes that require long cooking can often be prepared with the use of the fireless cooker or other fuel-saving device.

Take care to use some recipes that require thorough mastication so that starchy foods will be sufficiently well broken up to be thoroughly combined with the saliva. Such dishes are especially desirable when the percentage of meat has been reduced in the diet.

#### *References.*

- 256. Preparation of vegetables for the table.
- 391. Economical use of meat in the home.
- 487. Cheese: Economical use in the diet.
- 526. Mutton and its value in the diet.
- 559. Use of corn, kafir, and cowpeas in the home.
- 565. Corn meal as a food: Ways of using it.
- 653. Honey and its use in the home.
- 807. Bread and bread making.
- 900. Homemade fruit butters.
- 955. Use of wheat flour substitutes in bread making.

### **LESSON VI. THE ECONOMICAL USE OF FOOD THROUGH SMALL ECONOMIES.**

*Purchase.*—Buy carefully. Eliminate out-of-season foods. Have the butcher send home the trimmings from all meats purchased; secure accurate weight, full measures; buy bulk goods.

*Handling.*—Take care not to soil, break, spill, or bruise food materials or packages.

*Storage.*—Store food in such ways as to prevent deterioration in all forms.

Keep flour, cereals, and meals in clean covered utensils in a cool place.

Cooked foods that are to be saved should be covered, cooled quickly, and kept in a cold, dry place away from the dust, and should be used as soon as possible.

Keep fresh fruits and vegetables in a cool, dry place.

Store butter and eggs when abundant and cheap for use when scarce.

Can and dry fruits and vegetables when in season for future use.

*Preparation.*—Care should be taken not to injure or discard good materials when paring, when emptying bowls or crocks, or when draining. Thin paring should be made from vegetables, and all parts that contribute nourishment or appetizing flavor should be used in cooking.

*Cooking.*—Do not lose good materials through scorching, burning, undercooking, or bad combinations.

*Eliminate* the more expensive ingredients from a recipe.

Reduce the number of eggs, quantity of fat, amount of milk, etc. Edible garnishes, such as bacon and toast, should be dispensed with unless they are sure to be eaten.

*Substitute* cheaper or more abundant foods for those which are expensive and difficult to secure. For example: Cottage cheese, baked beans, peas, fish, or other protein foods in place of meat. Skimmed milk, sour milk, or buttermilk, for whole sweet milk or cream. Potatoes or rice in place of bread in a menu. Corn oil, cottonseed, or peanut oil, and oleomargarine or other fat for butter. Brown sugar, molasses, and corn sirup for refined white sugar. Corn meal, buckwheat flour, soy bean meal, barley, potato flour, and rice flour for white flour and other wheat products.

*Combinations.*—Use a small amount of meat with vegetables or cereals to provide a meat dish.

*Reduction.*—In the amount of expensive or much-needed foods that are not absolutely essential to a recipe—the number of eggs in a batter; the quantity of sugar and fats in breads; the amount of sugar in canned goods, etc.

*Accuracy of measurement* to secure definite results.

*Economical utilization* of all portions of the animal body, i. e., chicken fat, drippings from roast beef, bacon fat, bones for soup, etc.; of vegetable stalks, leaves, and roots; of fruit skins, cores, etc.

*Serving.*—Method of serving should be sufficiently attractive to insure the acceptability of the dish. Use of the individual butter pat to regulate the quantity of butter used. Use of a bread board on the table for the slicing of bread needed.

*Eating.*—Economy through the elimination of unnecessary consumption of food. For example: Superfluous courses at daily meals, at special meals, for social entertainment; refreshments at afternoon tea; light refreshments at social entertainments; and eating between meals.

*Removal from table.*—Care not to waste the teaspoonful of butter, the slice of bread, the half cup of milk, the piece of meat, the scrap of fat.

*Utilization of left-overs.*—Celery leaves, rice water, sour and skimmed milk, waste fats, portions of vegetables, cooked eggs, dry cheese, etc.

## LESSON VII. ECONOMY IN THE PURCHASE OF FOODS.

Plan market order in advance; know how much of each staple per week is required. Have regular times for marketing. If possible, save by large orders, shopping only once or twice a week.

Make personal selections, expecting only a minimum of delivery service. Consider food values in selection. Food value is more important than flavor.

Buy carefully, considering quality, quantity, variety. Buy only what can be used and thus avoid left-overs.

Order definitely. (By definite unit of weight or measure, preferably weight.)

Acquire a knowledge of season for various foods.

Consider home-grown fruits and vegetables versus imported fruits and vegetables. Consider fresh fruits and vegetables in season versus canned foods.

Acquire a knowledge of cuts of meat.

Consider ready-to-eat versus unprepared foods.

Buy meats sparingly.

Spend at least as much for milk as for meat.

Spend at least as much for vegetables and fruits as for meat and fish.

## LESSON VIII. ECONOMY MENUS.

Planning of meals for efficiency and economy.

Simple menus that utilize those foods which are most abundant and cheapest, and at the same time provide necessary variety and balance.

Saving wheat, meat, and expensive fats.

Increasing the use of fish, potatoes, beans, turnips, cabbage, and vegetables generally, and corn, buckwheat, rice, and milk.

Simple service. Meals of few courses.

### *References.*

Lusk, Graham. Food in war time. Philadelphia, Saunders. 50 cents.

Nesbit. Low cost cooking. American School of Home Economics. 50 cents.

Stern and Spitz. Food for the worker. Boston, Whitcomb & Barrows. \$1.

United States. Department of Agriculture. Food Leaflets 1-20.

— Farmers' Bulletin 712. School lunches.

— Farmers' Bulletin 808. How to select foods. I. What the body needs.

— Farmers' Bulletin 817. How to select foods. II. Cereal foods.

— Farmers' Bulletin 824. How to select foods. III. Foods rich in protein.

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## LESSON IX. CARE IN THE HANDLING AND KEEPING OF FOODS.

Method of delivery; personal and by order.

Home storage arrangements for cereals, vegetables, canned goods, dried fruits, etc. Receptacles and cupboard space.

Care in the handling of foods when preparing recipes.

Reduction of garbage by care in storage, cooking, and serving foods. Method of caring for garbage.

### *References.*

United States. Department of Agriculture. Farmers' Bulletin 375. Care of food in the home.

——— National Emergency Food Garden Commission.<sup>1</sup> Home drying manual for drying vegetables and fruits.

——— National War Garden Commission.<sup>1</sup> Home canning and drying of vegetables and fruits.

——— War vegetable gardening and the home storage of vegetables.

## LESSON X. THE HOME PRESERVATION OF FOODS.

The storage, drying, and canning of all surplus food products.

Methods of drying fruits and vegetables.

Recipes in which dried food products are used.

Methods of preserving eggs, butter, etc.

### *References.*

Bitting, A. W. and K. G. Canning and how to use canned foods.

Powell. Successful canning and preserving. Philadelphia, Lippincott Co. \$2.

Folin. Preservatives and other chemicals in foods. Harvard Health Talks. 50 cents.

Vulte and Vanderbilt. Food industries. Chemical Publishing Co. \$2.

United States. Department of Agriculture. Bulletin 123. Extension course in vegetable foods. Professional paper. Superintendent of Documents, Government Printing Office, Washington, D. C. 10 cents.

——— Farmers' Bulletin 839. Home canning by the one-period cold-pack method.

——— Farmers' Bulletin 853. Home canning of fruits and vegetables as taught to canning club members in the Southern States.

——— Farmers' Bulletin 881. Salting, fermentation, and packing of vegetables.

——— Farmers' Bulletin 900. Homemade fruit butters.

## LESSON XI. INFANT FEEDING. A QUESTION OF NATIONAL IMPORTANCE.

Infant's need for food.

Quantity of food needed and intervals at which food should be given.

Breast feeding and artificial feeding.

Care in the preparation of food for infants.

Dangers resulting from lack of proper nourishment for infants.

*References.*

- Grulee, C. G. Infant feeding. Philadelphia, Saunders. \$3.25.  
 Holt, L. E. The care and feeding of young children. New York, D. Appleton & Co. 75 cents.  
 United States. Department of Agriculture. Farmers' Bulletin No. 717. Food for young children.  
 ——— Department of Labor. Children's Bureau. Publication No. 4. Prenatal care.  
 ——— ——— ——— Publication No. 8. Infant care.  
 ——— ——— ——— Publication No. 30. Child care.  
 ——— ——— ——— Publication No. 35. Milk—indispensable food for children.  
 ——— Public Health Service. The care of the baby; the summer care of infants.

**LESSON XII. RESULTS OF INCORRECT DIET.**

Malnutrition or undernutrition.  
 Loss in weight.  
 Diminished resistance to cold.  
 Diminished industrial production.  
 Impairment of digestive powers.  
 Increased susceptibility to tuberculosis.  
 Pellagra and similar diseases.  
 Retardation of children.  
 Mental depression.  
 Conditions in belligerent countries.

*References.*

- [Current comment.] Is pellagra transmissible? Journal of the American Medical Association, 68: 39, January 6, 1917.  
 [Editorial.] The cost of adequate nutrition. Journal of the American Medical Association, February 2, 1918, p. 312.  
 [Editorial.] The food of the poorer classes in war time. Journal of the American Medical Association, January 26, 1918, p. 234.  
 [Editorial.] The food requirement of healthy children. Journal of the American Medical Association, 68: 1698, June 9, 1917.  
 [Editorial.] The etiology of scurvy. Journal of the American Medical Association, 69: 728, September 1, 1917.  
 [Editorial.] Unwise economies in diet. Journal of the American Medical Association, 69: 1435 (1917).

